Remarks/Arguments

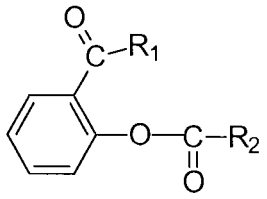
The Examiner rejects claims 1-4 and 7-13 under 35 U.S.C. 112, first paragraph, and claims 1-13 under 35 U.S.C.103(a).

The 112 Rejections:

The Examiner rejects claims 1-4 and 7-13 under 35 U.S.C. 112, first paragraph. First, the Examiner states that "the specification, while being enabling for an aromatic polycarbonate having free terminal groups, [the specification] does not reasonably provide enablement for all kinds of aromatic polycarbonates." *See* page 2 last paragraph of the Office Action. The Examiner's reasoning here is unclear to the Applicants. Applicants are not aware of any polycarbonate that does not have "free terminal groups". As a general principal, a polycarbonate must have at least two ends (e.g. a line drawn between a first starting point and a second ending point). In the polymer world, the starting point of the polymer chain is a "free terminal group" and the ending point is also a "free terminal group". Applicants therefore submit that the Examiner's reasoning is unclear and request clarification of this statement or in the alternative request the Examiner to withdraw the 112 rejections.

Next the Examiner says that the, "specification offers the only possible form of the aromatic polycarbonate to be used under melt conditions" to be that which comprises a free hydroxy end group (i.e. an -OH group) and suggests that an appropriate modification of claim 1 is required. *See* page 3 first paragraph of the office action. Claim 1 from which the balance of the claims of the application depend now reads:

> 1. (currently amended) A process for the production of an aromatic polycarbonate, the process comprising adding to a polycarbonate oligomer reaction mixture comprising polycarbonate with free hydroxy groups under melt conditions an amount of a terminal blocking agent of the following formula:



to form a polycarbonate having an increased level of capped or blocked hydroxy groups, wherein at least 80% of the blocking agent is added after the oligomer has reached a number-average molecular weight Mn of about 2,500 to 15,000 Dalton, and wherein R_1 is a propoxy or butoxy and R_2 is selected from the group consisting of C_1-C_{30} alkyl, C_1-C_{30} alkoxy, C_6-C_{30} aryl, C_7-C_{30} aralkyl, and C_6-C_{30} aryloxy.

Claim 1 and therefore the balance of the claims of the application are directed at increasing the level of **capped or blocked hydroxy groups** of the oligomer mixture comprising polycarbonate with free hydroxy groups to form the aromatic polycarbonate of the present invention.

The Examiner is correct to point out that 112 first paragraph imposes a duty which must be met by Applicant. 112 first paragraph requires that the specification enable others to practice the claimed invention. "An inventor need not, however, explain every detail since he is speaking to those skilled in the art." In re Howarth, 210 U.S.P.Q. 689 (C.C.P.A. 1981) at page 691. Furthermore, the claims need not recite such factors where one of ordinary skill in the art to whom the specification and claims are directed would consider them obvious. See MPEP section 2164.08 citing In re Skrivan, 427 F.2d 801, 806, 166 USPQ 85, 88 (CCPA 1970).

Applicants submit that even without the present amendment to claim 1 one skilled in the art would clearly understand that the oligomer mixture of original claim 1 (and therefore the rest of the claims of the application) has free terminal hydroxy end groups. In other words, the original claims (and the specification) read that the polycarbonate oligomer reaction mixture has a first level of capped or blocked hydroxy end groups where upon after the addition of the terminal blocking agent, a resulting polycarbonate has a second (increased) level of capped or blocked hydroxy end groups. *See* the entire application including the claims. There is nothing unclear about this and the same is fully enabled by the specification. *See, inter alia*, page 5 first full paragraph of the specification. Applicants submit that one having an ordinary level of skill

in the art would clearly understand, after reading the specification, what the claims of the application cover and further understand how to make and use the invention.

Nonetheless Applicants have herein amended claim 1 to include the language that the polycarbonate oligomer mixture comprises polycarbonate with free hydroxy groups. Therefore, Applicants respectfully request the Examiner to withdraw the 112 first paragraph rejections to the claims.

The 103 Rejections:

The Examiner rejects claims 1-13 under 103(a) saying that the claims are obvious in view of US 5,696,222 to Kaneko et al. (hereinafter Kaneko). Applicants respectfully traverse this rejection and submit that the present claims are not obvious in light of Kaneko for the reasons set forth below.

The Examiner correctly points out that the, "instant invention, however, differs from the prior art [Kaneko] in that . . . the claimed compound has a moiety of R1 (= to propoxy) unlike the prior art compound with R1 being ethoxy." See page 6 first full paragraph of the Office Action. The Examiner continues,

> "Regarding the absence of teaching using the claimed R1 (= propoxy) unlike the prior art compound with R1 being ethoxy. However, they are in a homologous relationship to each other with a difference of one carbon atom. Compounds that differ by the presence or absence of an extra methyl group or two are homologues. Homologues are of such close structural similarity that the disclosure of a compound renders *prima facia* obvious its homologue. [Sic.]" *See* page 6 last paragraph continuing onto page 7 of the Office Action.

Applicants note however that, "a prima facie case of obviousness based on structural similarity is rebuttable by proof that the claimed compounds possess unexpectedly advantageous or superior properties." See MPEP section 2144.09 citing In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963). Applicants submit that the difference between R1 of the present invention and the prior art is important.

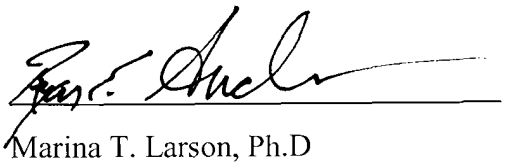
Applicants direct the Examiner's attention to the Example section of the present specification and to the unexpected effects demonstrated therein. Table 1 of the Example Section of the specification, contains the following information:

Sample	End cap %	100 - endcap %	% improvement
Comp 1-(none)	85.1	-	-
Comp 3 - Meth	90.2	9.8	34.2
Comp 4 - Eth	89.7	10.3	30.9
Ex 1 - Prop	91.3	8.7	41.6
Ex 2 - But	90.7	9.3	37.6

In this table, the % improvement is the percentage of the possible increase in endcap calculated as 100 x ((14.9 - (100 - % endcap)) / 14.9). In this calculation 14.9 is the maximum potential increase in endcap level % based on a polycarbonate with no endcapper added. *See* comparative example 1 (i.e. Comp 1 - (none)) whose end cap level is 85.1%. As can be seen from this table, the ethoxy substituent of comparative example 4 (i.e. Comp. 4 - Eth) works less well than the methyl substituent of comparative example 3 (i.e. Comp. 3 - Meth), but the propoxy substituent of invention example 1 (Ex 1 - prop) and butoxy substituent of invention example 2 (Ex 2 - but) both work better than the methyl. This is not an expected result of a homologous series, rather it is unexpected result of the present invention. Therefore Applicants submit that the Examiner's 103 rejections to the claims should be withdrawn.

For these reasons, this application is now considered to be in condition for allowance and such action is earnestly solicited. No fee or extension of time is believed to be due with the filing of this paper.

Respectfully submitted,



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